**Data Science Use Case Document Template**

**1. Problem Statement**

**Description:**  
Telecom companies face difficulties in setting optimal pricing and bundling strategies due to the dynamic nature of customer demands, competitor pricing, and market trends. Static pricing models fail to capture the real-time variations in customer willingness to pay, leading to lost revenue opportunities and customer churn. A solution is needed to enable dynamic, data-driven pricing and bundling.

**2. Target Variable / Number of Clusters**

**Definition:**  
The target outcomes are optimized pricing strategies and bundle recommendations that maximize revenue and customer satisfaction. Clustering can be used to segment customers based on purchasing behavior and preferences.

**3. Input Variables / Parameters**

**Key Influencers:**

* Customer purchasing history
* Competitor pricing data
* Seasonal and market trends
* Customer demographics and preferences
* Usage patterns (e.g., data, voice, or OTT services)
* Real-time demand signals

**4. Sector**

**Telecom**

**5. Approach / Technology Used**

**Technology Stack:**

* **Machine Learning Models**: For demand forecasting and price sensitivity analysis.
* **Optimization Algorithms**: To determine the best price points and bundle combinations.
* **Dynamic Pricing Engines**: Real-time systems to adjust prices based on market signals.
* **A/B Testing Platforms**: To evaluate the effectiveness of pricing and bundling strategies.
* **Data Visualization Tools**: For monitoring pricing trends and revenue performance.

**6. Benefits**

* Increased revenue through optimized pricing strategies.
* Improved customer retention by offering tailored bundles and discounts.
* Enhanced competitiveness by responding dynamically to market changes.
* Better understanding of customer behavior and price elasticity.

**7. Expected Outcome**

* **Revenue Growth**: 15-30% increase in revenue from dynamic pricing and bundling.
* **Customer Satisfaction**: Higher engagement and satisfaction from personalized offers.
* **Operational Efficiency**: Streamlined pricing processes with automation.
* **Scalable Solutions**: Adaptable pricing models for diverse customer segments.

**8. Challenges / Risks**

* Over-reliance on algorithms might lead to pricing inaccuracies.
* Data privacy concerns when using customer behavior data.
* Risk of alienating customers with frequent price changes.
* Implementation costs for dynamic pricing systems.